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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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08/916,629 08/22/97 COBBLEY

C 97-0098

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IM52/1024

EXAMINER

GALLAGHER, J

ART UNIT

PAPER NUMBER

1733

Handwritten mark

DATE MAILED:

10/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.

08/916629

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-22 and 40-44 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-22 and 40-44 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 19
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Applicants' Preliminary Amendment, filed 24 September 2001, has been received and made of record.

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Leo et al. in view of either Nishino et al. or Litke.

Di Leo et al. disclose that it is known to bond/adhere ^a semiconductor chip/element/device to a lead frame utilizing a room temperature curable (epoxy) adhesive, which (a) element and lead frame are also electrically (inter) connected by conductor/wire bonding; and (b) bonded composite is resin encapsulated (as is conventional). (Figs. 2-4, Abstract, column 1 lines 7-11 and N.B. lines 28-29, column 2 lines 1-14 and 38-56, column 3 lines 3-37 and N.B. lines 34-37, N.B. column 3 lines 51-56, N.B. column 4 lines 1-2 and 9-11).

Nishino et al. (Abstract, column 1 lines 8-14, column 2 line 60 thru column 3 line 29) and Litke (Abstract, column 1

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lines 11-34, column 3 lines 18-22 and 50-54) both disclose that it is known to incorporate a silica filler in a cyanoacrylate adhesive for various (and beneficial) effects (e.g. thixotropy), such that it would have been obvious to one of ordinary skill in this art to employ such filled adhesives in the bonding process of De Leo et al. in place of the corresponding, analogous adhesive employed therein; mere substitution of one known room temperature curing adhesive for another involved. The former/first named patentees also further disclose that cyanoacrylate monomers (a) are widely/generally used as instantaneous adhesives for a variety of substrates (e.g. metals, glasses etc.) and also in the bonding of electrical and electronic parts; (b) cure in a short period of time at room temperature (i.e. without heat); and (c) are initiated to polymerize by water or basic substances either present on (i.e. as/from humidity) or applied to the substrate surfaces to be bonded.

4. Claims 1-20 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over De Leo et al. in view of Mikuni et al. and further in view of either Nishino et al. or Litke.

Mikuni et al. disclose most similar to Nishino et al. (as set forth above) with respect to everything EXCEPT the presence of a filler component. (N.B. column 1 lines 9-16 and 29-30). It would have been obvious to one of ordinary skill in

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this art to employ/incorporate the silica filler of either Nishino et al. or Litke in the adhesive of Mikuni et al. for use in the process of De Leo et al.; mere incorporation of a known (and beneficial) material/ingredient in a known adhesive involved.

5. The foregoing art rejections of paragraphs 3-4 are repeated, with the addition of O'Sullivan et al. as a secondary reference to the statement of each.

O'Sullivan et al. disclose that cyanoacrylate adhesives (i.e. of the type shown in Mikuni et al., Nishino et al. and Litke) are known to cure in less than a/1 minute and in many cases in a matter of seconds. (N.B. column 1 lines 25-44). This reference is applied specifically and primarily for the sake of exposition and completeness, its teaching along the foregoing line being held/seen to be implicitly encompassed within that of the other three references referred to above.

6. Claims 21-22 and 40-44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over ~~De~~^{Leo} Leo et al. in view of Burnett et al. and Gruber et al.

Burnett et al. disclose that anaerobic curing acrylate/acrylic monomers are known to (a) polymerize rapidly at room temperature (i.e. without heat); and (b) find utility as adhesives in the bonding of various (e.g. electrical) substrates (N.B. column 1 lines 38-42, column 3 lines 47-58, column 5 lines

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4-26, column 18 lines 34-38, column 19 lines 15-24 and 54-75, column 20 lines 1-16).

Gruber et al. disclose that it is known to incorporate an (e.g. silica) filler in an acrylate based anaerobic adhesive (column 1 lines 7-15, N.B. column 4 lines 15-22), such that it would have been obvious to one of ordinary skill in this art to incorporate such a conventional, documented ingredient/component in the adhesive of Burnett et al. for use in the bonding process of De Leo et al. in place of the corresponding, analogous adhesive employed therein; mere substitution of one known room temperature curable adhesive for another involved.

7. Applicants should note that all of the above applied references are already of record.

8. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ 2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-22 and 40-44 are further provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-27, 29-39, 41-45, 53-62 and 64 (at least) of copending application Serial Nos. 09/065,944 (allowed) and 09/651,217 (presently and as yet unexamined). Although the conflicting claims are not identical, they are not patentably distinct from each other because the same (basic) inventive concept is held to be involved in both cases, with an almost total amount of overlap between the respective sets of claims, the copending claims being seen to be more comprehensive than (i.e. to encompass) the instant claims. This rejection is made on the basis of "same inventive entity".

This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. With each of the foregoing art rejections, it is INDEED the sum total of the teachings of the applied combined references taken as a whole which is held/seen to render applicants' invention obvious to one of ordinary skill in this art (In re McLaughlin 170 USPQ 209), and therefore applicants' piecemeal attack on the references individually cannot establish unobviousness, since these rejections are based upon a combination of references (In re Mapelsden 141 USPQ 30) i.e. these rejections are not overcome by pointing out that one

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reference does not contain a particular teaching when the reliance for that teaching was on another reference (In re Lyons, 155 USPQ 741), with the following being additionally advanced: in response to applicants' contentions in the amendment (a) before proceeding further, it is noted that the word "YEAR" at page 16 line 9 should apparently read "minute"; (b) although the newly inserted limitation (e.g. in line 6 of claim 1) is not clearly understood and held/seen to be (1) at least partially inaccurate (i.e. N.B. page 7 lines 5-6, page 9 lines 17-19 and page 8 lines 26-33 of the specification) and also redundant/unnecessary (in view of e.g. the last three steps in claim 1), it is noted that the curable room temperature curing adhesive of De Leo et al. indeed contacts the (bonding surface of the) ~~dye~~^{film}; (c) that no anticipatory (i.e. 35 U.S.C. § 102) references are of record or applied against the claims does not automatically render the claims patentable, the statute also providing for the determination of claims to be unpatentable under other criteria viz. unobviousness (i.e. 35 U.S.C. § 103); and (d) both Nishino et al. and Litke fairly disclose and document the (known and conventional) incorporation of a filler material in a cyanoacrylate adhesive for a beneficial function/result, which foregoing is held to be in agreement with applicants' specification at page 4 lines 23-29, wherein the "tailoring" envisioned by applicants is clearly

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indicated/disclosed as constituting a benefit/beneficial result in the form of an improvement.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. J. Gallagher whose telephone number is (703) 308-1971. The examiner can normally be reached on M-F from approximately 8:30 A.M. to 5 P.M. The examiner can also be reached on alternate N/A.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball, can be reached on (703) 308-2058. The fax phone number for this Group is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661/0662.


JJGallagher:cdc

October 16, 2001


JOHN J. GALLAGHER
PRIMARY EXAMINER
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